

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
15 September 2005 (15.09.2005)

PCT

(10) International Publication Number
WO 2005/085282 A1

- (51) International Patent Classification⁷: **C07K 14/54**
- (21) International Application Number:
PCT/EP2005/002367
- (22) International Filing Date: 10 February 2005 (10.02.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
04290542.2 27 February 2004 (27.02.2004) EP
- (71) Applicant (for all designated States except US): INSERM (INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE) [FR/FR]; 101, rue de Tolbiac, F-75654 Paris Cedex 13 (FR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BERNARD, Jérôme [FR/FR]; 2 Impasse Pierre Sarre, F-79600 Airvault (FR). PLET, Ariane [FR/FR]; 88, Quai de la Fosse, F-44100 Nantes (FR). JACQUES, Yannick [FR/FR]; 32 bis, rue Noire, F-44000 Nantes (FR). HARB, Catherine [FR/FR]; 13, rue des Granits, F-44100 Nantes (FR). QUEMENER, Agnès [FR/FR]; 10, rue des Frères Amieux, F-44100 Nantes (FR). MORTIER, Erwan [FR/FR]; 1, rue du Maréchal de Gassion, F-44100 Nantes (FR).
- (74) Agent: PARIS, Fabienne; Ernest Gutmann - Yves Plasseraud S.A., 3, rue Chauveau-Lagarde, F-75008 Paris (FR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/085282 A1

(54) Title: IL-15 BINDING SITE FOR IL15-RALPHA AND SPECIFIC IL-15 MUTANTS HAVING AGONISTS/ANTAGONISTS ACTIVITY

(57) Abstract: The present invention relates to the identification of an epitope in human Interleukin-15 (IL-15) that is responsible for binding to the interleukin-15 receptor α -chain. Two IL-15 regions are involved in the formation of this epitope: the first region ($_{44}$ LLELQLQVISL $_{52}$, peptide 1) corresponds to a sequence located in the B helix and the second ($_{64}$ ENLII $_{68}$, peptide 2 or $_{64}$ ENLIII $_{69}$, peptide 2a) to a sequence located in helix C. Muteins displaying agonist or antagonist properties are described, and may be useful as therapeutic agents.